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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,920	09/29/2000	Gary D. Zimmerman	MP0966(13036/5)	8995
60537	7590	09/20/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE/MARVELL P.O. BOX 10395 CHICAGO, IL 60610			PHAM, THIERRY L	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/675,920	ZIMMERMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thierry L. Pham	2625	

All participants (applicant, applicant's representative, PTO personnel):

(1) Thierry L. Pham. (3) \_\_\_\_\_.

(2) Michael Chu. (4) \_\_\_\_\_.

Date of Interview: 14 September 2006.

Type: a) Telephonic b) Video Conference  
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1.

Identification of prior art discussed: US 6587140 to Young No.

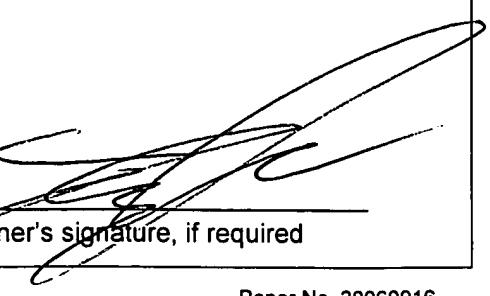
Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussions include proposed changes to independent claims and cited prior art of record (US 6587140). No agreement has been reached..

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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Amendments To The Claims

1. (Currently amended) A printing system comprising

- a host device for executing programs;
- an office machine having a print engine for receiving print engine ready data and based thereon for rendering images and a PC card slot for receiving PC cards; wherein the office machine does not have any printer controller circuit a printer controller and;
- a PC card for removably coupling with the PC card slot of the office machine and for coupling with the host device, the PC card having a printer controller integrated circuit for providing substantially all printer controller functions for the office machine, the printer controller integrated circuit for receiving printer controller ready data from the host device and based thereon for generating print engine ready data; wherein the office machine requires the PC card with printer controller to be coupled thereto to render images; and wherein the printer controller may be replaced or upgraded by a user without intervention of the manufacturer of the office machine; and
- printing software having an automatic update module that automatically downloads to the printer controller from a source an updated version of printer controller firmware.

2. (Currently amended) The printing system of claim 1 further comprising:

- printer controller firmware that when executed by the printer controller causes the printer controller to perform printer controller functions,

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~~d) printing software having an automatic update module that when executing on the host device automatically downloads to the host device from a source one of an updated version of printer controller firmware and the printing software.~~

3. (Original) The printing system of claim 2 wherein the source is one of a web server and a computer readable medium.

4. (Cancelled) The printing system of claim 2 wherein the automatic update module when executing on the host device automatically downloads to the printer controller an updated version of printer controller firmware.

5. (Currently amended) An office machine comprising:

- a laser print engine for rendering images; and
- ~~a~~ a PC card slot coupled to the laser print engine for receiving a removable PC card that includes a printer controller for controlling substantially all printer controller functions of the office machine; wherein the PC card slot is utilized to transfer output from the printer controller to the laser print engine; wherein the office machine requires the PC card with printer controller to be coupled thereto to render images; and wherein a defective printer controller may be replaced by an operational printer controller or an out-dated printer controller may be upgraded with a new printer controller by removing the PC card with the defective or old printer controller from the office machine and by inserting a new PC card with the operational or new printer controller into the office machine; and

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c) printing software having an automatic update module that automatically  
downloads to the printer controller from a source an updated version of  
printer controller firmware.

6. (Currently amended) The office machine of claim 5 further comprising:
  - d) a print engine ready data interface for coupling to a PC card and selectively receiving print engine ready data therefrom.
7. (Previously presented) The office machine of claim 5 wherein the office machine is one of a laser printer, and an all-in-one office machine that includes a laser printer.
8. (Currently amended) A removable PC card for removably coupling with a corresponding card slot in a laser printer comprising:
  - a) a printer controller integrated circuit for ~~providing printer controller controlling~~ controlling substantially all printer controller functions of the printer; and
  - b) a connector having a print engine ready data interface for coupling to the laser office machine and selectively receiving print engine ready data therefrom; wherein the PC card is adapted for insertion into a corresponding PC card slot in the laser printer and wherein the printer controller integrated circuit may provide printer controller functions to the laser printer when coupled thereto; wherein a defective printer controller may be replaced by an operational printer controller or an out-dated printer controller may be upgraded with a new printer controller by removing the PC card with the

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defective or old printer controller from the laser printer and by inserting a new PC card with the operational or new printer controller into the laser printer; and wherein the printer controller receives automatically updated printer controller firmware.

9. (Original) The removable PC card of claim 8 further comprising:
  - c) a connector having a printer formatter ready data interface for coupling to a host machine and selectively receiving printer formatter ready data therefrom.
10. (Withdrawn) A method of printing in a system that includes an office machine having a print engine and a slot for receiving a PC card, a PC card for removably coupling to the office machine, the PC card having a printer controller and a memory for storing a printer controller program, a host having a printing software, the method comprising:
  - a) determining whether the PC card has been operationally coupled to the slot of the office machine;
  - b) when it is determined that the PC card has been operationally coupled to the office machine, then determining whether the printer controller program is loaded in the memory of the printer formatter; otherwise proceeding to step (a);
  - c) when it is determined that the printer controller program is loaded in the memory, then determining whether the printer controller program is valid; otherwise, loading the printer controller program into the memory and repeating step (c);

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- d) when it is determined that the printer controller program is valid, then determining whether the printer controller program is compatible with the print engine, the printing software and printer formatter;
- e) when it is determined that the printer controller program is loaded, valid, and compatible with the print engine, the printing software and printer controller, then sending data to be printed to the printer controller.

11. (Withdrawn) The method of claim 10 further comprising:  
d1) when the printer controller program is one of not loaded, invalid, and incompatible, then notifying a user of the incompatibility.

12. (Withdrawn) The method of claim 10 further comprising:  
d1) when the printer controller program is one of not loaded, invalid, and incompatible, then downloading the printer controller program to the memory.

13. (Withdrawn) The method of claim 12 wherein downloading the printer controller program to the printer controller further comprises:  
downloading the printer controller program from the host to the memory.

14. (Withdrawn) The method of claim 12 wherein downloading the printer controller program to the printer controller further comprises:  
downloading the printer controller program from a web site to the memory.

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15. (Withdrawn) The method of claim 10 wherein determining whether the printer controller program is valid further comprises:  
performing a cyclic redundancy check on the printer controller program.
16. (Previously presented) The printing system of claim 1 wherein the PC card includes a form factor that is one of a form factor of the Personal Computer Memory Card International Association (PCMCIA) type I card, a form factor of PCMCIA type II card, and a form factor of PCMCIA type III card.
17. (Previously presented) The removable PC card of claim 8 wherein the PC card includes a form factor that is one of a form factor of the Personal Computer Memory Card International Association (PCMCIA) type I card, a form factor of PCMCIA type II card, and a form factor of PCMCIA type III card.
18. (Previously presented) The office machine of claim 5 wherein the PC card slot receives PC cards having a form factor that is one of a form factor of the Personal Computer Memory Card International Association (PCMCIA) type I card, a form factor of PCMCIA type II card, and a form factor of PCMCIA type III card.